

REMARKS

In view of the above amendments and the following remarks, reconsideration and further examination are respectfully requested.

I. Telephone Interview

The Applicants would like to thank Examiner Leiby for granting and conducting a telephone interview on November 18, 2010 in connection with the above-identified application.

During the interview, the Examiner initially presented his concern that the independent claims include subject matter that is not part of the elected invention (i.e., the invention related to Fig. 40). Specifically, the Examiner was concerned that (i) the adjusting of the local contrast is not described in the elected invention, (ii) the average signal value of the plurality of pixels is not described in the specification at all, (iii) the correcting of the degree of the adjusting is not described in the elected invention, and (iv) the phrase “within a predetermined input range of the input image signal” is not described in the specification at all.

Regarding above-noted (i), please note that the Applicants’ representative explained to the Examiner that the adjusting of the local contrast is based on, at least, functions F4 and/or F5, which are part of the elected embodiment.

Regarding above-noted (ii), the Examiner suggested replacing the phrase “average signal value of the plurality of pixels” with “brightness of the plurality of pixels.” Further, regarding above-noted (iii), the Examiner suggested combining the features of the “adjusting” and the “correcting of the degree of the adjusting.” Regarding above-noted (iv), the Examiner suggested deleting the phrase “within a predetermined input range of the input image signal.”

In addition, the Examiner suggested amending the claims to clarify a relationship between (i) the target pixel converted according to the determined conversion characteristic, and (ii) the output signal generated by performing the visual processing.

Furthermore, the Examiner noted that once the independent claims are amended to remain consistent with the elected invention and to overcome the 35 U.S.C. §112 rejections, then he would be able to more accurately make a decision on patentability based on the prior art of record.

Finally, the Examiner kindly agreed that he would **not** issue a first-action final rejection if the Applicants filed a Request for Continued Examination (RCE) along with the after final amendment.

II. Amendments to the Claims

Based on the above-mentioned telephone interview, claims 10, 13, 14 and 15 have been cancelled without prejudice or disclaimer of the subject matter recited therein, and claims 9, 12, 17 and 21-25 have been amended address the Examiner's concerns identified during the telephone interview so as to clarify features of the invention recited therein and to further distinguish the present invention from the reference relied upon in the rejection discussed below.

Support for these amendments can be found, at least in Figs. 1, 7 and 40 and pages 17-20, 107 and 108 of the substitute specification filed on May 26, 2010.

III. 35 U.S.C. § 112, Second Paragraph Rejections

Claims 9, 10, 14, 17, 21 and 23-25 were rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, claims 9, 10, 14, 17, 21 and 23-25 were rejected for reciting terms such as “monotonically decreases as a corresponding value of the processed signal increases,” etc. Claims 10 and 14 have been cancelled and claims 9, 17, 21 and 23-25 have been amended to remove the terms identified by the Examiner as being indefinite. As a result, withdrawal of this portion of the 35 U.S.C. § 112 rejection is respectfully requested.

Further, claims 14 and 17 were rejected for reciting the terms “upwardly convex” and “downwardly convex.” This rejection is considered moot in regards to cancelled claim 14. Claim 17 has been amended to clarify that the value of the output converted signal is based on a downwardly convex curve, wherein a degree of the downwardly convex curve is adjusted based on various factors. In view of the above, it is respectfully submitted that claim 17 is no longer indefinite. As a result, withdrawal of this portion of the 35 U.S.C. § 112 rejection is requested.

IV. 35 U.S.C. § 103(a) Rejection

Claims 9, 10, 12 and 21-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hansen (U.S. 6,069,597). This rejection is believed clearly inapplicable to amended independent claims 9 and 23-25 for the following reasons.

Amended independent claim 9 recites a visual processing device including a parameter outputter determining/outputting an adjustment parameter according to ambient light. In addition, claim 9 recites that the visual processing device includes a spatial processor spatially

processing pixels surrounding a target pixel of an input image signal, so as to output a processed signal, and includes a visual processor receiving the input image signal, the processed signal and the adjustment parameter, for determining a conversion characteristic according to the (spatially) processed signal, for adjusting the determined conversion characteristic to an adjusted conversion characteristic according to the adjustment parameter, and for converting the target pixel of the input image signal according to the adjusted conversion characteristic, so as to output an output converted signal. Further, claim 9 recites that the visual processor determines the conversion characteristic, such that, with respect to a specific brightness of the input image signal and as the brightness of the processed signal increases, a value of the output converted signal decreases. Claim 9 also recites that the visual processor adjusts the determined conversion characteristic, such that, according to the adjustment parameter, as a brightness of the ambient light increases, at least one of a brightness and a local contrast of the output converted signal increases. Hansen fails to disclose or suggest the above-mentioned distinguishing features, as required by amended claim 9.

Rather, the Applicants note that Hansen teaches changing a brightness of a display panel itself in accordance with ambient light without deteriorating the resolution of grayscale (horizontal resolution). Specifically, Hansen teaches changing a voltage applied to rows of the display panel using a PWM signal, such that the brightness of the display panel is controlled by adjusting the voltage applied to the rows by changing a length of an on-time window, causing the amplitude of the relative column voltage to remain constant so as not to deteriorate the resolution of grayscale (horizontal resolution) (see Figs. 4 and 6; and col. 7, lines 27-46).

Accordingly, Hansen teaches changing a brightness of the display itself without deteriorating the resolution of grayscale (horizontal resolution), by only changing the driving

voltage applied to the rows in accordance with changes of ambient light without changing the driving voltage applied to the column.

Thus, in view of the above, even though Hansen teaches changing a brightness of the display itself without deteriorating the resolution of grayscale (horizontal resolution), by only changing the driving voltage applied to the rows in accordance with changes of ambient light without changing the driving voltage applied to the column, Hansen still fails to disclose or suggest (i) determining a conversion characteristic according to the (spatially) processed signal, such that, with respect to a specific brightness of the input image signal and as the brightness of the processed signal increases, a value of the output converted signal decreases, (ii) adjusting the determined conversion characteristic to an adjusted conversion characteristic according to the adjustment parameter, such that, according to the adjustment parameter, as a brightness of the ambient light increases, at least one of a brightness and a local contrast of the output converted signal increases, and (iii) converting the target pixel of the input image signal according to the adjusted conversion characteristic, so as to output the output converted signal, as recited in claim 9.

In other words, claim 9 recites that as the brightness of the processed signal increases, the value of the output converted signal decreases, which is completely different from the purpose of Hansen, which is to increase brightness as ambient light increases.

Therefore, because of the above-mentioned distinctions it is believed clear that independent claim 9 and claims 12 and 17 that depend therefrom would not have been obvious in view of Hansen.

Furthermore, there is no disclosure or suggestion in Hansen or elsewhere in the prior art of record which would have caused a person of ordinary skill in the art to modify Hansen to

obtain the invention of independent claim 9. Accordingly, it is respectfully submitted that independent claim 9 and claims 12 and 17 that depend therefrom are clearly allowable over the prior art of record.

Amended independent claims 21, 23, 24 and 25 are directed to a device, a method, a processor and a program, respectively and each recite features that correspond to the above-mentioned distinguishing features of independent claim 9. Thus, for the same reasons discussed above, it is respectfully submitted that independent claims 21, 23, 24 and 25 and claim 22 that depends therefrom are allowable over Hansen.

V. Conclusion

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance and an early notification thereof is earnestly requested. The Examiner is invited to contact the undersigned by telephone to resolve any remaining issues.

Respectfully submitted,

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December 29, 2010